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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/824,359	04/15/2004	Hiroshi Sakakibara	119468	6314

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EXAMINER

NGUYEN, TRAN N

ART UNIT PAPER NUMBER

2834

DATE MAILED: 06/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

Office Action Summary

Application No.

10/824,359

Applicant(s)

SAKAKIBARA ET AL.

Examiner

Tran N. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) 1-3,5 and 6 is/are rejected.
- 7) ☐ Claim(s) 4 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 1-3 and 5-6** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Masuno** (JP2002-119008) in view of **Hagenlocher** et al (US 4,286,186).

Masuno discloses the an alternator (1) mounted to an engine in a vehicle, comprising:

- a rotor (3) rotatable about a rotation shaft (33);
- a stator (2) provided on an outer periphery of the rotor;
- a frame (6) holding the rotation shaft of the rotor and the stator;
- an alternator pulley (8) connected to a first end of the rotation shaft on an outside of the frame;
- an electrical component (brushes (4), rectifier (5)) provided adjacent to a second end of the rotation shaft on the outside of the frame;
- a protection cover (7) disposed at rear end thereof to surround the electrical component;

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the frame has a top protection cover forms air intake openings (61, 62) through which air is introduced toward the electrical component, and the top cover is arranged above the air intake openings of the protection cover (figs 1-2).

Masuno also discloses the alternator is mounted vertically with the pulley face upward. Masuno substantially discloses the claimed invention, except for *the structure of the protection rear cover that surrounds the electrical component, wherein the rotation shaft is arranged such that the second end is higher than the first end so that the pulley faces downward, and the engine's crank shaft is vertically parallel to each other at substantially the same level.*

Hagenlocher, however, teaches an alternator with a protection cover (32) disposed at rear end of the alternator to surround the electrical components, such as brushes and the brush holder, voltage regulator, slip ring, rectifier diodes (28-31). Unlike the Masuno protection cover, Hagenlocher's cover does not have any openings at the surface of the cover. Thus, comparing the Masuno's cover and the Hagenlocher's cover, the later would provide more effective protecting shield for the electrical components from being effected by foreign matters such as dust, mud etc. Those skilled in the art would understand that with such cover, it would have been obvious to an artisan to arrange the alternator with the axial rear end facing upward so that the pulley at the other axial end with the pulley facing downward and the engine's crank shaft is vertically parallel to each other at substantially the same level. Such arrangement would enable the alternator to fit within a narrow space of the vehicle and facilitate the connection between the engine's shaft and the pulley. Such arrangement is a reverse arrangement with respect to the Masuno's alternator arrangement, thus it requires only necessary mechanical skills in the art.

Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the Masuno's alternator by configuring the protection cover without any opening, as taught by Hagenlocher. Doing so would provide an improved protection cover that

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shield foreign matters from entering the interior of the alternator. Also, with this structure of the cover, it would have been obvious to one skilled in the art at the time the invention was made to rearrange the alternator so that the rotation shaft is arranged such that the second end is higher than the first end so that the pulley faces downward for facilitate the connection between the engine's shaft and the alternator shaft and reduce mechanical vibration generated in the alternator's electrical component assembly. Furthermore, it has been held that rearranging part of an invention involves only routine skill in the art (*In re Japikse*, 86 USPQ 70) since one of ordinary skill in the art would have the necessary mechanical skill to make simple reversals of positions of mechanical parts without an express teaching in a reference (*In re Bozek*, 416 F.2d 1385, 1390, 163 USPQ 545, 549 (CCPA 1969)).

Allowable Subject Matter

Claim 4 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

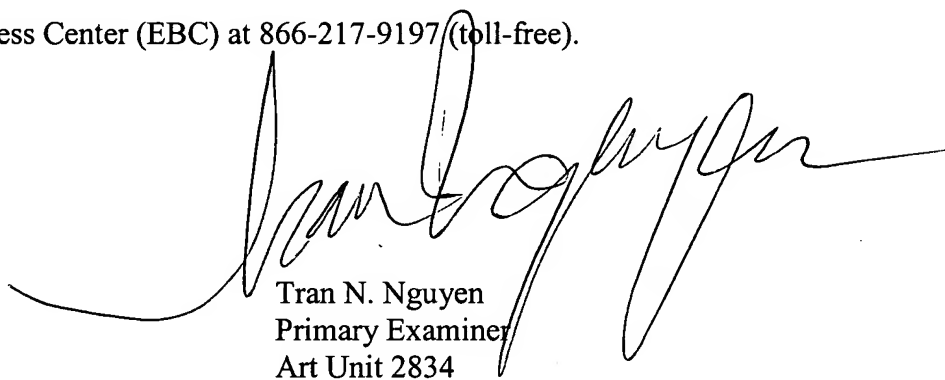
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tran N. Nguyen whose telephone number is (571) 272-2030. The examiner can normally be reached on M-F 7:00AM-4:00PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on (571)-272-2044. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Tran N. Nguyen
Primary Examiner
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